

```
<110> Chen, Fang
<120> DNA MOLECULES ENCODING HUMAN NUCLEAR
      RECEPTOR PROTEINS
<130> 19999Y
<160> 30
<170> FastSEQ for Windows Version 3.0
<210> 1
<211> 2807
<212> DNA
<213> Human
```

- 1 -

```

caaggccgtg cagcacttct atagcgtcaa actgcagggc aaagtgccca tgcacaaact 2220
cttcctggag atgctggagg ccaaggcctg ggccagggct gactcccttc aggagtggag 2280
gccactggag caagtgccct ctcccctcca ccgagccacc aagaggcagc atgtgcattt 2340
cctaactccc ttgccccctc ccccatctgt ggcctgggtg ggactgctc aggctggata 2400
ccacctggag gttttccttc cgcagagggc aggttggcca agagcagctt agaggatctc 2460
ccaaggatga aagaatgtca agccatgatg gaaaatgccc cttccaatca gctgccttca 2520
caagcagggg tcaagagcaac tccccgggga tccccaatcc acgcccttct agtccaaccc 2580
ccctcaatga gagaggcagg cagatctcac ccagcactag gacaccagga ggccagggaa 2640
agcatctctg gctcaccatg taacatctgg cttggagcaa gtgggtgttc tgcacaccag 2700
gcagctgcac ctactggat ctagtgttgc tgcgagtgac ctcacttcag agcccctcta 2760
gcagagtggg gcggaagtcc tgatggttgg tgtccatgag gtggaag 2807

```

<210> 2  
 <211> 500  
 <212> PRT  
 <213> Human

<400> 2

```

Met Ser Ser Asp Asp Arg His Leu Gly Ser Ser Cys Gly Ser Phe Ile
 1          5          10          15
Lys Thr Glu Pro Ser Ser Pro Ser Ser Gly Ile Asp Ala Leu Ser His
 20          25          30
His Ser Pro Ser Gly Ser Ser Asp Ala Ser Gly Gly Phe Gly Leu Ala
 35          40          45
Leu Gly Thr His Ala Asn Gly Leu Asp Ser Pro Pro Met Phe Ala Gly
 50          55          60
Ala Gly Leu Gly Gly Thr Pro Cys Arg Lys Ser Tyr Glu Asp Cys Ala
 65          70          75          80
Ser Gly Ile Met Glu Asp Ser Ala Ile Lys Cys Glu Tyr Met Leu Asn
 85          90          95
Ala Ile Pro Lys Arg Leu Cys Leu Val Cys Gly Asp Ile Ala Ser Gly
 100          105          110
Tyr His Tyr Gly Val Ala Ser Cys Glu Ala Cys Lys Ala Phe Phe Lys
 115          120          125
Arg Thr Ile Gln Gly Asn Ile Glu Tyr Ser Cys Pro Ala Thr Asn Glu
 130          135          140
Cys Glu Ile Thr Lys Arg Arg Lys Ser Cys Gln Ala Cys Arg Phe
 145          150          155          160
Met Lys Cys Leu Lys Val Gly Met Leu Lys Glu Gly Val Arg Leu Asp
 165          170          175
Arg Val Arg Gly Gly Arg Gln Lys Tyr Lys Arg Arg Leu Asp Ser Glu
 180          185          190
Ser Ser Pro Tyr Leu Ser Leu Gln Ile Ser Pro Pro Ala Lys Lys Pro
 195          200          205
Leu Thr Lys Ile Val Ser Tyr Leu Leu Val Ala Glu Pro Asp Lys Leu
 210          215          220
Tyr Ala Met Pro Pro Pro Gly Met Pro Glu Gly Asp Ile Lys Ala Leu
 225          230          235          240
Thr Thr Leu Cys Asp Leu Ala Asp Arg Glu Leu Val Val Ile Ile Gly
 245          250          255
Trp Ala Lys His Ile Pro Gly Phe Ser Ser Leu Ser Leu Gly Asp Gln
 260          265          270
Met Ser Leu Leu Gln Ser Ala Trp Met Glu Ile Leu Ile Leu Gly Ile
 275          280          285
Val Tyr Arg Ser Leu Pro Tyr Asp Asp Lys Leu Val Tyr Ala Glu Asp
 290          295          300

```

Tyr Ile Met Asp Glu Glu His Ser Arg Leu Ala Gly Leu Leu Glu Leu  
 305 310 315 320  
 Tyr Arg Ala Ile Leu Gln Leu Val Arg Arg Tyr Lys Lys Leu Lys Val  
 325 330 335  
 Glu Lys Glu Glu Phe Val Thr Leu Lys Ala Leu Ala Leu Ala Asn Ser  
 340 345 350  
 Asp Ser Met Tyr Ile Glu Asp Leu Glu Ala Val Gln Lys Leu Gln Asp  
 355 360 365  
 Leu Leu His Glu Ala Leu Gln Asp Tyr Glu Leu Ser Gln Arg His Glu  
 370 375 380  
 Glu Pro Trp Arg Thr Gly Lys Leu Leu Leu Thr Leu Pro Leu Leu Arg  
 385 390 395 400  
 Gln Thr Ala Ala Lys Ala Val Gln His Phe Tyr Ser Val Lys Leu Gln  
 405 410 415  
 Gly Lys Val Pro Met His Lys Leu Phe Leu Glu Met Leu Glu Ala Lys  
 420 425 430  
 Ala Trp Ala Arg Ala Asp Ser Leu Gln Glu Trp Arg Pro Leu Glu Gln  
 435 440 445  
 Val Pro Ser Pro Leu His Arg Ala Thr Lys Arg Gln His Val His Phe  
 450 455 460  
 Leu Thr Pro Leu Pro Pro Pro Ser Val Ala Trp Val Gly Thr Ala  
 465 470 475 480  
 Gln Ala Gly Tyr His Leu Glu Val Phe Leu Pro Gln Arg Ala Gly Trp  
 485 490 495  
 Pro Arg Ala Ala  
 500

<210> 3  
 <211> 2985  
 <212> DNA  
 <213> Human

<400> 3

gcgggccgcc	agtgtggtgg	aattcggtt	gtcactagga	gaacatttgt	gttaattgca	60
ctgtgctctg	tcaaggaaac	tttgatttat	agctggggtg	cacaaataat	ggttgccggt	120
cgcacatgga	ttcggtagaa	ctttgccttc	ctgaatcttt	ttccctgcac	tacgaggaag	180
agcttctctg	cagaatgtca	aacaaagatc	gacacattga	ttccagctgt	tcgtccttca	240
tcaagacgga	accttcagc	ccagcctccc	tgacggacag	cgtcaaccac	cacagccctg	300
gtggctcttc	agacgccagt	gggagctaca	gttcaaccat	gaatggccat	cagaacggac	360
ttgactcgcc	acctctctac	ccttctgctc	ctatcctggg	aggtagtggg	cctgtcagga	420
aactgtatga	tgactgctcc	agcaccattg	ttgaagatcc	ccagaccaag	tgtgaatata	480
tgctcaactc	gatgcccaag	agactgtgtt	tagtgtgtgg	tgacatcgct	tctgggtacc	540
actatggggt	agcatcatgt	gaagcctgca	aggcattctt	caagaggaca	attcaaggca	600
atatagaata	cagctgccct	gccacgaatg	aatgtgaaat	cacaaagcgc	agacgtaaat	660
cctgccaggc	ttgccgcttc	atgaagtgtt	taaaagtggg	catgctgaaa	gaaggggtgc	720
gtcttgacag	agtacgtgga	ggtcggcaga	agtacaagcg	caggatagat	gcggagaaca	780
gcccatacct	gaaccctcag	ctgggttcagc	cagccaaaaa	gccatataac	aagattgtct	840
cacatttgtt	ggtggctgaa	ccggagaaga	tctatgccat	gcctgaccct	actgtccccc	900
acagtacat	caaagccctc	actacactgt	gtgacttggc	cgaccgagag	ttggtggtta	960
tcattggatg	ggcgaagcat	attccaggct	tctccacgct	gtccctggcg	gaccagatga	1020
gccttctgca	gagtgcttgg	atggaaattt	tgatccttgg	tgctgtatac	cggtctcttt	1080
catttgagga	tgaacttgtc	tatgcagacg	attatataat	ggacgaagac	cagtccaaat	1140
tagcaggcct	tcttgatcta	aataatgcta	tcctgcagct	ggtaaagaaa	tacaagagca	1200
tgaagctgga	aaaagaagaa	tttgtcacc	tcaaagctat	agctcttgct	aattcagact	1260
ccatgcacat	agaagatggt	gaagccgttc	agaagcttca	ggatgtctta	catgaagcgc	1320
tgcaggatta	tgaagctggc	cagcacatgg	aagaccctcg	tcgagctggc	aagatgctga	1380

```

tgacactgcc actcctgagg cagacctcta ccaaggccgt gcagcatttc tacaacatca 1440
aactagaagg caaagtccca atgcacaaac tttttttgga aatgttggag gccaagggtct 1500
gactaaaagc tccctggggc ttcccatcct tcatgttgaa aaagggaataa taaacccaag 1560
agtgtgtcg aagaaactta gaggtttagt aacaacatca aaaatcaaca gactgcactg 1620
ataatttagc agcaagacta tgaagcagct ttcagattcc tccatagggt cctgatgagt 1680
tctttctact ttctccatca tctttcttcc tctttcttcc cacatttctc tttctcttta 1740
ttttttctcc ttttcttctt tcacctccct tatttctttg cttctttcat tcctagtctc 1800
cattctcctt tattttcttc ccgtctgcct gccttctttc ttttctttac ctactctcat 1860
tcctctcttt tctcatcctt cccctttttt ctaaatttga aatagcttta gtttaaaaaa 1920
aaaaatccct ccttccccct ttcccttccc tttctttcct ttttcccttt ccttttccct 1980
ttcctttcct ttccctttga ccttctttcc atctttcttt ttcttcttcc tgctgctgaa 2040
cttttaaaag aggtctctaa ctgaagagag atggaagcca gccctgccaa aggatggaga 2100
tccataatat ggatgccagt gaacttattg tgaaccatac cgtccccaat gactaaggaa 2160
tcaaagagag agaaccaacg ttccataaaag tacagtgcac catatacaaa ttgactgagt 2220
gcagtattag atttcatggg agcagcctct aattagacaa cttaagcaac gttgcatcgg 2280
ctgcttctta tcattgcttt tccatctaga tcagttacag ccatttgatt ccttaattgt 2340
tttttcaagt cttccaggta tttgttagtt tagctactat gtaacttttt caggggaatag 2400
tttaagcttt attcattcat gcaatactaa agagaaataa gaatactgca attttgtgct 2460
ggctttgaac aattacgaac aataatgaag gacaaatgaa tcctgaagga agatttttaa 2520
aaatgttttg tttcttctta caaatggaga tttttttgta ccagctttac cacttttcag 2580
ccatttatta atatgggaat ttaacttact caagcaatag ttgaagggaa ggtgcatatt 2640
atcacggatg caatttatgt tgtgtgccag tctgggtcca aacatcaatt tcttaacatg 2700
agctccagtt tacctaaatg ttcactgaca caaaggatga gattacacct acagtgactc 2760
tgagtgtaca catatataag cactgcacat gagatataga tccgtagaat tgtcaggagt 2820
gcacctctct acttgggagg tacaattgcc atatgatttc tagctgccat ggtggttagg 2880
aatgtgatac tgccgttttg caaagtcaca gaccttgccct cagaaggagc tgtgagccag 2940
tattcattta agagaattcc accacactgg cggccccgcg ttgat 2985

```

<210> 4  
 <211> 458  
 <212> PRT  
 <213> Human

<400> 4

```

Met Asp Ser Val Glu Leu Cys Leu Pro Glu Ser Phe Ser Leu His Tyr
1 5 10 15
Glu Glu Glu Leu Leu Cys Arg Met Ser Asn Lys Asp Arg His Ile Asp
20 25 30
Ser Ser Cys Ser Ser Phe Ile Lys Thr Glu Pro Ser Ser Pro Ala Ser
35 40 45
Leu Thr Asp Ser Val Asn His His Ser Pro Gly Gly Ser Ser Asp Ala
50 55 60
Ser Gly Ser Tyr Ser Ser Thr Met Asn Gly His Gln Asn Gly Leu Asp
65 70 75 80
Ser Pro Pro Leu Tyr Pro Ser Ala Pro Ile Leu Gly Gly Ser Gly Pro
85 90 95
Val Arg Lys Leu Tyr Asp Asp Cys Ser Ser Thr Ile Val Glu Asp Pro
100 105 110
Gln Thr Lys Cys Glu Tyr Met Leu Asn Ser Met Pro Lys Arg Leu Cys
115 120 125
Leu Val Cys Gly Asp Ile Ala Ser Gly Tyr His Tyr Gly Val Ala Ser
130 135 140
Cys Glu Ala Cys Lys Ala Phe Phe Lys Arg Thr Ile Gln Gly Asn Ile
145 150 155 160
Glu Tyr Ser Cys Pro Ala Thr Asn Glu Cys Glu Ile Thr Lys Arg Arg
165 170 175

```

Arg Lys Ser Cys Gln Ala Cys Arg Phe Met Lys Cys Leu Lys Val Gly  
 180 185 190  
 Met Leu Lys Glu Gly Val Arg Leu Asp Arg Val Arg Gly Gly Arg Gln  
 195 200 205  
 Lys Tyr Lys Arg Arg Ile Asp Ala Glu Asn Ser Pro Tyr Leu Asn Pro  
 210 215 220  
 Gln Leu Val Gln Pro Ala Lys Lys Pro Tyr Asn Lys Ile Val Ser His  
 225 230 235 240  
 Leu Leu Val Ala Glu Pro Glu Lys Ile Tyr Ala Met Pro Asp Pro Thr  
 245 250 255  
 Val Pro Asp Ser Asp Ile Lys Ala Leu Thr Thr Leu Cys Asp Leu Ala  
 260 265 270  
 Asp Arg Glu Leu Val Val Ile Ile Gly Trp Ala Lys His Ile Pro Gly  
 275 280 285  
 Phe Ser Thr Leu Ser Leu Ala Asp Gln Met Ser Leu Leu Gln Ser Ala  
 290 295 300  
 Trp Met Glu Ile Leu Ile Leu Gly Val Val Tyr Arg Ser Leu Ser Phe  
 305 310 315 320  
 Glu Asp Glu Leu Val Tyr Ala Asp Asp Tyr Ile Met Asp Glu Asp Gln  
 325 330 335  
 Ser Lys Leu Ala Gly Leu Leu Asp Leu Asn Asn Ala Ile Leu Gln Leu  
 340 345 350  
 Val Lys Lys Tyr Lys Ser Met Lys Leu Glu Lys Glu Glu Phe Val Thr  
 355 360 365  
 Leu Lys Ala Ile Ala Leu Ala Asn Ser Asp Ser Met His Ile Glu Asp  
 370 375 380  
 Val Glu Ala Val Gln Lys Leu Gln Asp Val Leu His Glu Ala Leu Gln  
 385 390 395 400  
 Asp Tyr Glu Ala Gly Gln His Met Glu Asp Pro Arg Arg Ala Gly Lys  
 405 410 415  
 Met Leu Met Thr Leu Pro Leu Leu Arg Gln Thr Ser Thr Lys Ala Val  
 420 425 430  
 Gln His Phe Tyr Asn Ile Lys Leu Glu Gly Lys Val Pro Met His Lys  
 435 440 445  
 Leu Phe Leu Glu Met Leu Glu Ala Lys Val  
 450 455

<210> 5  
 <211> 2987  
 <212> DNA  
 <213> Human

<400> 5

gcgggccgcc	agtgtggtgg	aattcggctt	gtcactagga	gaacatttgt	gttaattgca	60
ctgtgctctg	tcaaggaaac	tttgatttat	agctgggggtg	cacaaataat	ggttgccggt	120
cgcacatgga	ttcggtagaa	ctttgccttc	ctgaatcttt	ttccctgcac	tacgaggaag	180
agcttctctg	cagaatgtca	aacaaagatc	gacacattga	ttccagctgt	tcgtccttca	240
tcaagacgga	accttccagc	ccagcctccc	tgacggacag	cgtcaaccac	cacagccctg	300
gtggctcttc	agacgccagt	gggagctaca	gttcaaccat	gaatggccat	cagaacggac	360
ttgactcgcc	acctctctac	ccttctgctc	ctatcctggg	aggtagtggg	cctgtcagga	420
aactgtatga	tgactgctcc	agcaccattg	ttgaagatcc	ccagaccaag	tgtgaataca	480
tgctcaactc	gatgcccaag	agactgtgtt	tagtgtgtgg	tgacatcgct	tctgggtacc	540
actatggggt	agcatcatgt	gaagcctgca	aggcattctt	caagaggaca	attcaaggca	600
atatagaata	cagctgccct	gccacgaatg	aatgtgaaat	cacaaagcgc	agacgtaaat	660
cctgccaggc	ttgccgcttc	atgaagtgtt	taaaagtggg	catgctgaaa	gaaggggtgc	720
gtcttgacag	agtacgtgga	ggtcggcaga	agtacaagcg	caggatagat	gcggagaaca	780

```

gccatacct gaaccctcag ctgggtcage cagccaaaaa gccatataac aagattgtct 840
cacatttggt ggtggctgaa ccggagaaga tctatgccat gcctgaccct actgtccccg 900
acagtacat caaagccctc actacactgt gtgacttggc cgaccgagag ttggtggtta 960
tcattggatg ggcgaagcat attccaggct tctccacgct gtccctggcg gaccagatga 1020
gccttctgca gagtgcttgg atggaaatth tgatccttgg tgcgtatac cggctctctt 1080
catttgagga tgaacttgtc tatgcagacg attatataat ggacgaagac cagtccaaat 1140
tagcaggcct tcttgatcta aataatgcta tccgtcagct ggtaaagaaa tacaagagca 1200
tgaagctgga aaaagaagaa tttgtcacc ccaaagctat agctcttgct aattcagact 1260
ccatgcacat agaagatggt gaagccgttc agaagcttca ggatgtctta catgaagcgc 1320
tgcaggatta tgaagctggc cagcacatgg agaagaccct cgtcgagctg gcaagatgct 1380
gatgacactg ccactcctga ggcagacctc taccaaggcc gtgcagcatt tctacaacat 1440
caaactagaa ggcaaagtcc caatgcacaa actttttttg gaaatgttgg aggccaaggt 1500
ctgactaaaa gtcctctggg ccttcccatc cttcatgttg aaaaaggga aataaaccca 1560
agagtgatgt cgaagaaact tagagttag ttaacaacat caaaaatcaa cagactgcac 1620
tgataattta gcagcaagac tatgaagcag ctttcagatt cctccatagg ttcctgatga 1680
gttctttcta ctttctccat catcttctt cctctttctt cccacatttc tctttctctt 1740
tattttttct cttttcttct tttcacctcc cttatttctt tgcttcttct attcctagtt 1800
cccattctcc tttattttct tcccgtctgc ctgccttctt tcttttctt acctactctc 1860
attcctctct tttctcatcc ttcccctttt ttctaaatth gaaatagctt tagtttaaaa 1920
aaaaaaatcc tcccctcccc ctttcccttc cctttcttct ctttttccct ttccttttcc 1980
ctttccttcc ctttctctct gaccttcttt ccatcttctt ttttcttct tctgctgctg 2040
aactttttaa agaggtctct aactgaagag agatggaagc cagccctgcc aaaggatgga 2100
gatccataat atggatgcca gtgaacttat tgtgaaccat accgtcccca atgactaagg 2160
aatcaaagag agagaaccac cgttcctaaa agtacagtgc aacatataca aattgactga 2220
gtgcagtatt agatttcatg ggagcagcct ctaattagac aacttaagca acgttgcatc 2280
ggctgcttct tatcattgct tttccatcta gatcagttac agccatttga ttccttaatt 2340
gttttttcaa gtcttccagg tatttgtag ttttagctact atgtaacttt ttcagggaat 2400
agtttaagct ttattcattc atgcaatact aaagagaaat aagaatactg caattttgtg 2460
ctggctttga acaattacga acaataatga aggacaaatg aatcctgaag gaagattttt 2520
aaaaatgttt tgtttcttct tacaatgga gatttttttg taccagcttt accacttttc 2580
agccatttat taatatggga atttaactta ctcaagcaat agttgaaggg aagggtgcata 2640
ttatcacgga tgcaatttat gttgtgtgcc agtctggtcc caaacatcaa tttcttaaca 2700
tgagctccag tttacctaaa tgttactga cacaaaggat gagattacac ctacagtgc 2760
tctgagtagt cacatatata agcactgcac atgagatata gatccgtaga attgtcagga 2820
gtgcacctct ctacttggga ggtacaattg ccatatgatt tctagctgcc atggtggtta 2880
ggaatgtgat actgcctgtt tgcaaagtca cagaccttgc ctcagaagga gctgtgagcc 2940
agtattcatt taagagaatt ccaccacact ggcgggccgc gcttgat 2987

```

<210> 6  
 <211> 418  
 <212> PRT  
 <213> Human

```

<400> 6
Met Asp Ser Val Glu Leu Cys Leu Pro Glu Ser Phe Ser Leu His Tyr
1 5 10 15
Glu Glu Glu Leu Leu Cys Arg Met Ser Asn Lys Asp Arg His Ile Asp
20 25 30
Ser Ser Cys Ser Ser Phe Ile Lys Thr Glu Pro Ser Ser Pro Ala Ser
35 40 45
Leu Thr Asp Ser Val Asn His His Ser Pro Gly Gly Ser Ser Asp Ala
50 55 60
Ser Gly Ser Tyr Ser Ser Thr Met Asn Gly His Gln Asn Gly Leu Asp
65 70 75 80
Ser Pro Pro Leu Tyr Pro Ser Ala Pro Ile Leu Gly Gly Ser Gly Pro
85 90 95

```

Val Arg Lys Leu Tyr Asp Asp Cys Ser Ser Thr Ile Val Glu Asp Pro  
 100 105 110  
 Gln Thr Lys Cys Glu Tyr Met Leu Asn Ser Met Pro Lys Arg Leu Cys  
 115 120 125  
 Leu Val Cys Gly Asp Ile Ala Ser Gly Tyr His Tyr Gly Val Ala Ser  
 130 135 140  
 Cys Glu Ala Cys Lys Ala Phe Phe Lys Arg Thr Ile Gln Gly Asn Ile  
 145 150 155 160  
 Glu Tyr Ser Cys Pro Ala Thr Asn Glu Cys Glu Ile Thr Lys Arg Arg  
 165 170 175  
 Arg Lys Ser Cys Gln Ala Cys Arg Phe Met Lys Cys Leu Lys Val Gly  
 180 185 190  
 Met Leu Lys Glu Gly Val Arg Leu Asp Arg Val Arg Gly Gly Arg Gln  
 195 200 205  
 Lys Tyr Lys Arg Arg Ile Asp Ala Glu Asn Ser Pro Tyr Leu Asn Pro  
 210 215 220  
 Gln Leu Val Gln Pro Ala Lys Lys Pro Tyr Asn Lys Ile Val Ser His  
 225 230 235 240  
 Leu Leu Val Ala Glu Pro Glu Lys Ile Tyr Ala Met Pro Asp Pro Thr  
 245 250 255  
 Val Pro Asp Ser Asp Ile Lys Ala Leu Thr Thr Leu Cys Asp Leu Ala  
 260 265 270  
 Asp Arg Glu Leu Val Val Ile Ile Gly Trp Ala Lys His Ile Pro Gly  
 275 280 285  
 Phe Ser Thr Leu Ser Leu Ala Asp Gln Met Ser Leu Leu Gln Ser Ala  
 290 295 300  
 Trp Met Glu Ile Leu Ile Leu Gly Val Val Tyr Arg Ser Leu Ser Phe  
 305 310 315 320  
 Glu Asp Glu Leu Val Tyr Ala Asp Asp Tyr Ile Met Asp Glu Asp Gln  
 325 330 335  
 Ser Lys Leu Ala Gly Leu Leu Asp Leu Asn Asn Ala Ile Leu Gln Leu  
 340 345 350  
 Val Lys Lys Tyr Lys Ser Met Lys Leu Glu Lys Glu Glu Phe Val Thr  
 355 360 365  
 Leu Lys Ala Ile Ala Leu Ala Asn Ser Asp Ser Met His Ile Glu Asp  
 370 375 380  
 Val Glu Ala Val Gln Lys Leu Gln Asp Val Leu His Glu Ala Leu Gln  
 385 390 395 400  
 Asp Tyr Glu Ala Gly Gln His Met Glu Lys Thr Leu Val Glu Leu Ala  
 405 410 415  
 Arg Cys

<210> 7  
 <211> 403  
 <212> DNA  
 <213> Human

<400> 7  
 ctttttagga ggtggagaaa ttgtgaagct caggtatggg ctgctctctg agtccagccg 60  
 tcgcttgat ttctgacggc ctccacgcac tcgatcaagg cgcacacctt ccttcagcat 120  
 cccactttg aggcatttca tgaagcggca ggctggcag gacttgccg tccgtttggt 180  
 gatctgcac tcgttggtgg cggggcagct gtactcaatg ttcccttgga tagtctctt 240  
 gaagaaggcc ttgcaagcct cgcaggaggc ccacgcgtna gtggtagcca gagnaagt 300  
 ccccgcacac gaggcacagg cgcttgggga tggcgttgag catgttactt cgcacttgga 360  
 tgggcccagc cctccatgga tggccgctgg caacagttcc tcg 403

<210> 8  
 <211> 622  
 <212> DNA  
 <213> Human

<400> 8

cnnnnnnnnnn	nnnttttnt	gcctaaagt	gtaccngaa	gngatgtcac	cacacactaa	60
acacagtctc	ttgggcatcg	agttgagcat	gtattcacac	ttgggtctggg	gatcttcaac	120
aatgggtgctg	gagcagtcac	catacagttt	cctgacaggc	ccactacctc	ccaggatagg	180
agcagaaggg	tagagaggtg	gcgagtcaag	tccgttctga	tggccattca	tggttgaact	240
gtagctccca	ctggcgtctg	aagagccacc	agggtgtg	tgggtgacgc	tgtccgtcag	300
ggaggctggg	ctggaaggtt	ccgtcttgat	gaaggacgaa	cagctggaat	caatgtgtcg	360
atctttgttt	ggacattctg	cagagaagct	cttcctccgt	ngtgcaggga	aaaagattca	420
ggaaggcaaa	gttcttccc	aatccatgtg	cgaccggaaa	ccattatttg	ngcaccaccag	480
ctattaatca	aagttccttg	acagagacag	ggcaattaca	naatgtctcc	tntnggggat	540
caactgttcn	gtattnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	600
nnnnnnnnnn	nnnnnnnnnn	tt				622

<210> 9  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 9

tgagtccagc	cgtcgcttgt	at	22
------------	------------	----	----

<210> 10  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 10

tgcaagcctc	gcaggaggcc	20
------------	------------	----

<210> 11  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 11

ggccttcttc	aagaggacta	tc	22
------------	------------	----	----

<210> 12  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence



<220>  
 <223> oligonucleotide  
  
 <400> 12  
 aaagatcgac acattgattc c 21  
  
 <210> 13  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 13  
 gacttgactc gccacctctc 20  
  
 <210> 14  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 14  
 gttctgatgg ccattcatgg t 21  
  
 <210> 15  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 15  
 gaatatgatg accctaatagc a 21  
  
 <210> 16  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 16  
 cttccacctc atggacacca a 21  
  
 <210> 17  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide  
  
 <400> 17  
 gttaattgca ctgtgctctg 20  
  
 <210> 18  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 18  
 agtgtggtgg aattctctta 20  
  
 <210> 19  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 19  
 tctagtgttg ctgcgagtga c 21  
  
 <210> 20  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 20  
 cttccacctc atggacacca a 21  
  
 <210> 21  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> oligonucleotide  
  
 <400> 21  
 gtctgactaa aagctccctg 20  
  
 <210> 22  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> oligonucleotide

<400> 22

gaagatgatg gagaaagtag a

21

<210> 23

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 23

cattccacgg aggcacctc

20

<210> 24

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 24

ccaaggccgt gcagcacttc

20

<210> 25

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 25

gacagcctct agatcctcga t

21

<210> 26

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 26

atcatggctt gacattcttt c

21

<210> 27

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 27  
agctcttgct aattcagac

19

<210> 28  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> oligonucleotide

<400> 28  
tcaacatgaa ggatgggaag g

21

<210> 29  
<211> 2807  
<212> DNA  
<213> Human

<400> 29  
cttatactac tgggattacg ttgttataga ttgtatgata ggctcgaagc cagtaaacct 60  
tcttgacgtc taaaaggagg aagttttaat ttcagtccaa tacctcttgt acatacgata 120  
caagaactaa cgaagcgact tcttcgtaac tttatataac caaagtggac cttttccggt 180  
tatatgggtc atcttcttaa tcttcttctt tcgcaacgtc ttctactacg tcttaattgt 240  
aatttatattc acctacttct taaacacctt cttctctgtc tattacttct tttgaaataa 300  
ctagagttgc aaaatttccg ggtctgtata gtgaacctat acttgctctg acggtttgtt 360  
ctttctataaa accttaggtg ttgtctacga cgtcttacct cggatcttca ccttgcacat 420  
gatggcggtg actttcagtg ctaatcctga ctgttattcc taacctotta ggtacaactg 480  
gtttacgtgg tcgtgtcttc accttaactt agacgagatt tctctgggt ccctaaaaac 540  
ctggtttgagg tattacttta atgatcctga aaccttttct agtcgtcggc tcttttcatg 600  
tagtttttag tcggccctcg ggtacctcgt gacaggagtc tctacgcgtc caatccgagt 660  
gacagatccg gtccgggtgg aatcagtgac acctgacctg taccttcgag aaggacctgt 720  
gtggacggga tcgggagtg gacccacact tctctttact cgaaccgaac gttgagtcgt 780  
gtaaggtgcc tccgtaggag gggaaggag cgcaccactt attttcaaag gactccagtt 840  
cctgaaggaa aagggacggt ttaaccacag gtcttgaaac tccggtctcc actagggtcac 900  
taaaccctcg acgtccagtg tgtccgacga gtctcccgac gacttgctct acaggagcct 960  
gctgtccgtg gacccgaggt cgacgccgag gaagtagttc tgactcggca ggtcgggcag 1020  
gagcccgat ctacgggagt cgtggtgtc ggggtcacgc agcaggctgc ggtcgccgcc 1080  
gaaaccggac cgggacctgt gggtgcggtt gccagacctg agcgggtgggt acaaactgcc 1140  
gcgcccgac cctccgtggg gtacggcggt ctgatgctc ctgacacggt cgccgtagta 1200  
cctcctgagc cggtagttca cgctcatgta cgagttgcg taggggttcg cggacacgga 1260  
gcacacgccc ctgtaacgga gaccgatggt gatgccgcac cggaggacgc tccgaacggt 1320  
ccggaagaag ttctcctgat aggttccctt gtaactcatg tcgacgggce ggtggttgc 1380  
cacgctctag tggtttgctt ccgcgttcag gacgggtccg acggcgaagt actttacgga 1440  
gtttcaccac tacgacttcc ttccacacgc ggaactagct caccgacctc cggcagttct 1500  
tatgttcgct gccgacctga gtctctcgtc ggggtatggac tcgaatgttt aaagaggtgg 1560  
acgatttttc ggtaactggt tctaacagag tatggatgac caccgactcg gcctgttcga 1620  
gatacggtac ggagggggac catacggact cccctgtag ttccgggact ggtgagagac 1680  
actggaccgt ctggctctcg aacaccagta gtaaccgacc cggttcgtgt aggggtccgaa 1740  
gagttcggag agggaccccc tggctactc ggacgacgtc tcacggacct accttagga 1800  
gtaggaccgc tagcacatgg cgagcgacgg gatgtcgtg ttcgaccaca tgcgactcct 1860  
gatgtagtag ctactcctcg tgagggcgga ggcggcgac gacctcgaga tggcccggtg 1920  
ggacgtcgac catgcgtcca tgttcttcga gttccacctc ttctcctca aacactgcga 1980  
gttcggggac cgggagcggg tgaggctaag gtacatgtag ctctagatc tccgacaggt 2040  
cttcgacgtc ctggacgacg tgctccgtga cgtcctgatg ctcgactcgg tcgcggtact 2100

cctcgggacc	tcttgcctgt	tcgacgacga	ctgtgacggc	gacgacgccc	tctgcccggc	2160
gttcgggcac	gtcgtgaaga	tatcgcagtt	tgacgtccc	tttcacgggt	acgtgtttga	2220
gaaggacctc	tacgacctcc	ggttccggac	ccggtcccga	ctgagggaa	tcctcacctc	2280
cgggtgacctc	gttcacggga	gaggggaggt	ggctcgggtg	ttctccgtcg	tacacgtaaa	2340
ggattgaggg	aacgggggag	ggggtagaca	ccggacccac	ccgtgacgag	tcggacctat	2400
gggtggacctc	caaaaggaag	gcgtctccc	tccaaccggg	tctcgtcgaa	tctcctagag	2460
ggttcctact	ttcttacagt	tcgggtactac	cttttacggg	gaaggttagt	cgacggaagt	2520
gttcgtccct	agtctcgttg	aggggcccct	aggggttagg	tgcggaaga	tcagggtggg	2580
gggagttact	ctctccgtcc	gtctagagt	ggctcgtgat	ctgtggctct	ccgggtccct	2640
tcgtagagac	cgagtgggtac	attgtagacc	gaacctcgtt	caccacaag	acgtgtggtc	2700
cgtcgacgtg	gagtgaccta	gatcacaacg	acgtcactg	gagtgaagtc	tcggggagat	2760
cgtctcaccc	cgccttcagg	actaccaacc	acaggtactc	caccttc		2807

&lt;210&gt; 30

&lt;211&gt; 2985

&lt;212&gt; DNA

&lt;213&gt; Human

&lt;400&gt; 30

cgcccgggcg	tcacaccacc	ttaagccgaa	cagtgatcct	cttgtaaaca	caattaacgt	60
gacacgagac	agttcctttg	aaactaaata	tcgacccac	gtgtttatta	ccaacggcca	120
gcgtgtacct	aagccatctt	gaaacggaag	gacttagaaa	aagggaagtg	atgctccttc	180
tcgaagagac	gtcttacagt	ttgtttctag	ctgtgtaact	aaggtcgaca	agcaggaagt	240
agttctgcct	tggaaggtcg	ggtcggaggg	actgcctgtc	gcagttgggtg	gtgtcgggac	300
caccgagaag	tctgcggtca	ccctcgatgt	caagttggta	cttaccggta	gtcttgctcg	360
aactgagcgg	tggaagagatg	ggaagacgag	gataggaccc	tccatcaccc	ggacagtcct	420
ttgacatact	actgacgagg	tcgtggtaac	aacttctagg	ggctcgggtc	acacttatgt	480
acgagttgag	ctacgggttc	tctgacacaa	atcacacacc	actgtagcga	agacccatgg	540
tgatacccca	tcgtagtaca	cttcggacgt	tcgtaagaa	gttctcctgt	taagttccgt	600
tatatcttat	gtcgacggga	cggtgcttac	ttacacttta	gtgtttcgcg	tctgcattta	660
ggacgggtccg	aacggcgaag	tacttcacaa	atcttcaccc	gtacgacttt	cttccccacg	720
cagaactgtc	tcatgcacct	ccagccgtct	tcatgttcgc	gtcctatcta	cgcctcttgt	780
cgggtatgga	cttgggagtc	gaccaagtgc	gtcggttttt	cgggtatattg	ttctaacaga	840
gtgtaaaaca	ccaccgactt	ggcctcttct	agatacggta	cggactggga	tgacaggggc	900
tgctactgta	gtttcgggag	tgatgtgaca	cactgaaccg	gctggctctc	aaccaccaat	960
agtaacctac	ccgcttcgta	taaggctcca	agaggtgcga	cagggaaccg	ctggtctact	1020
cgggaagacgt	ctcacgaacc	tacctttaaa	actaggaacc	acagcatatg	gccagagaaa	1080
gtaaactcct	acttgaacag	atacgtctgc	taatatatta	cctgcttctg	gtcaggttta	1140
atcgtccgga	agaactagat	ttattacgat	aggacgtcga	ccatttcttt	atgttctcgt	1200
acttcgacct	ttttcttctt	aaacagtggg	agtttcgata	tcgagaacga	ttaagtctga	1260
ggtacgtgta	tcttctacaa	cttcggcaag	tcttcgaagt	cctacagaat	gtacttcgcg	1320
acgtcctaata	acttcgaccg	gtcgtgtacc	ttctgggagc	agctcgaccg	ttctacgact	1380
actgtgacgg	tgaggactcc	gtctggagat	ggttccggca	cgtcgtaaag	atgttgtagt	1440
ttgatcttcc	gtttcagggt	tacgtgtttg	aaaaaaacct	ttacaacctc	cggttccaga	1500
ctgattttcg	agggacccgg	aagggttagga	agtacaactt	tttccctttt	atgtgggttc	1560
tcactacagc	ttctttgaat	ctcaaataca	ttgttgtagt	ttttagttgt	ctgacgtgac	1620
tattaaatcg	tcgttctgat	acttcgtcga	aagtctaagg	aggtatccaa	ggactactca	1680
agaaagatga	aagaggtagt	agaagaaagg	agaaagaagg	gtgtaaagag	aaagagaaat	1740
aaaaaagagg	aaaagaagaa	agtggaggga	ataaagaaac	gaagaaagta	aggatcaagg	1800
gtaagaggaa	ataaagaag	ggcagacgga	cggaaagaaag	aaaagaatg	gatgagagta	1860
aggagagaaa	agagtaggaa	ggggaaaaaa	gatttaaaat	ttatcgaaat	caaatttttt	1920
tttttaggag	ggaaggggga	aaggaaagg	aaagaaagga	aaaagggaaa	ggaaaaggga	1980
aaggaaagga	aaggagaact	ggaagaaagg	tagaaagaaa	aagaaggaag	acgacgactt	2040
gaaaattttc	tccagagatt	gacttctctc	taccttcggg	cgggacgggt	tcctacctct	2100
aggtattata	cctacgggtca	cttgaataac	acttggtatg	gcaggggtta	ctgattcctt	2160
agtttctctc	tcttggttgc	aaggattttc	atgtcacggt	gtatatgttt	aactgactca	2220

cgtcataatc	taaagtaccc	tcgtcggaga	ttaatctgtt	gaattcgttg	caacgtagcc	2280
gacgaagaat	agtaacgaaa	aggtagatct	agtcaatgtc	ggtaaactaa	ggaattaaca	2340
aaaaagttca	gaagggtccat	aaacaatcaa	atcgatgata	cattgaaaaa	gtcccttatt	2400
aaattcgaaa	taagtaagta	cgttatgatt	tctctttatt	cttatgacgt	taaaacacga	2460
ccgaaacttg	ttaatgcttg	ttattacttc	ctgtttactt	aggacttcct	tctaaaaatt	2520
ttacaaaac	aaagaagaat	gtttacctct	aaaaaaacat	ggtcgaaatg	gtgaaaagtc	2580
ggtaaataat	tataccctta	aattgaatga	gttcgttatc	aacttcctt	ccacgtataa	2640
tagtgacctac	gttaaataca	acacacgggc	agaccagggt	ttgtagtta	agaattgtac	2700
tcgagggtcaa	atggatttac	aagtgactgt	gtttcctact	ctaattgtga	tgtcactgag	2760
actcatcagt	gtatatattc	gtgacgtgta	ctctatatct	aggcatctta	acagtcctca	2820
cgtggagaga	tgaaccctcc	atgttaacgg	tatactaaag	atcgacggta	ccaccaatcc	2880
ttacactatg	acggacaaac	gtttcagtg	ctggaacgga	gtcttcctcg	acactcggtc	2940
ataagtaaat	tctcttaagg	tggtgtgacc	gccgggcgcg	aacta		2985